



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,573	01/29/2004	Bruce M. Russell	IR 7191-00	6198
23909	7590	04/05/2006	EXAMINER	
COLGATE-PALMOLIVE COMPANY			KILKENNY, PATRICK L	
909 RIVER ROAD			ART UNIT	
PISCATAWAY, NJ 08855			PAPER NUMBER	
			3732	
DATE MAILED: 04/05/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/767,573

Applicant(s)

RUSSELL ET AL.

Examiner

Patrick J. Kilkeny

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 15, 18, and 20-25 are rejected under 35 U.S.C. 102(b) as being unpatentable over Brenman (3,261,978) in view of Muller et al. (6,485,300). Brenman discloses a method of detecting plaque on a user's teeth by incorporating a dye in a toothpaste which has the characteristic of being fluorescent in the presence of UV light (3650 angstrom units or 365nm) (Column 1, lines 37-40, 43-46). This dye carrying toothpaste, after being applied to the toothbrush and then brushed onto the teeth, is

irradiated with ultraviolet light creating a visual fluorescent where plaque is still present (Column 1, lines 49-56). The UV light source is within a toothbrush (Column 1, lines 46-49; Figure 2) and is activated by a switch (Figure 1, # 14). The toothbrush is described as being either manual or powered (Column 2, lines 38-41 and 45-49; Figure 5).

Brenman does not disclose that the dye is at a concentration of 0.075-0.30% by volume, that light source is an LED, or that the UV radiation it emits is at a wavelength of 378-373nm. Muller et al. discloses a toothbrush with a fluorescence means for locating plaque that utilizes and LED as the UV light source on the toothbrush. Therefore, it would have been obvious to modify the UV light source of Brenman by incorporating an LED as the UV light source, as taught by Muller et al., to obtain a toothbrush with a much more compact light source and one that requires low power that is still capable of emitting the desired wavelength of light. It also would have been obvious to modify the methods of Brenman by using a dye that makes up 0.075-0.30% by volume of the combined carrier and dye and to also modify the light so that the UV wavelength was in the range of 378-373nm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Claims 16-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brenman in view of Muller et al., as applied to claims 15, 18, and 20-25 above, and further in view of Brilliant (3,309,274). Brenman in view of Muller et al. discloses the claimed invention with the exception of the carrier is in liquid form and is gargled to apply to the user's teeth and excess dye and carrier is removed from the user's mouth

Art Unit: 3732

by rinse and spitting before UV irradiation. Brilliant discloses a method of detecting plaque on a user's teeth by incorporating a dye in a liquid form which has the characteristic of being fluorescent in the presence of UV light (3000-5200 angstrom units) (Column 1, lines 61-65 and Column 4, lines 46-50). The patient's mouth is rinsed with the solution (the patient inherently spits the rinse out removing the excess fluorescent dye) and then is exposed to ultraviolet light to expose residual plaque (Column 5, lines 54-59). Therefore it would have been obvious to modify the carrier and dye combination of Brenman in view of Muller et al. to a liquid one (which is inherently gargled, rinsed, and spit), as taught by Brilliant, since Brenman discloses that other "tooth cleansers" could be used to carry the dye, and a liquid tooth cleanser can more effectively reach the remote areas of the teeth that can't be reached by a toothbrush similar to other liquid teeth and mouth cleansers.

Response to Arguments

In response to Applicant's argument that claim 15 does not include certain features of Applicant's invention, the limitations on which the Applicant relies (i.e., limitations for the dye and specific light source and emission wavelength) are not stated in the original claims. Therefore, it is irrelevant whether the reference includes those features or not. These limitations are taken into consideration for the *amended* claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Kilkenny whose telephone number is (571) 272-8684. The examiner can normally be reached on Mon-Fri, 8-5:30.

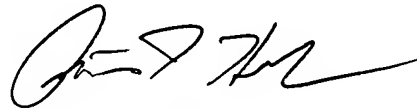
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin P. Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3732

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



PJK



Patrick J. Kilkenney

Art Unit 3732

March 22, 2006

3/22/06



Cary E. O'Connor
Primary Examiner